UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,579	09/27/2000	Jun-ichi Matsuda	040425/0147	6134

22428 7590 06/24/2004

FOLEY AND LARDNER
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
SORRELL, ERON J	

ART UNIT	PAPER NUMBER
2182	15

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/671,579	MATSUDA, JUN-ICHI	
	Examiner	Art Unit	
	Eron J Sorrell	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 17-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-14* is/are allowed.

6)☒ Claim(s) *17-24 and 29-38* is/are rejected.

7)☒ Claim(s) *25-28 and 39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 September 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 12/1/03 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 17-19,21-24,29-32, and 34-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattig (U.S. Patent No. 6,466,549) in view of Yanagawa (U.S. Patent No. 6,667,992).

4. Referring to apparatus claim 17 and method claim 30, Hattig discloses a method and a device controller for acquiring device information in which a function of devices is written from the devices connected to a network constituted by a single bus which is a local bus to which the devices are connected or a network formed by connecting, through the bridges, a plurality of busses including the local bus and remote buses to which the devices are not connected, comprising:

discriminating means for discriminating whether the network is constituted by a plurality of buses or a single bus (see lines 27-47 of column 4);

bus ID acquisition means for acquiring a bus ID assigned to each of the remote busses (see lines 27-47 of column 4);

information acquisition means for acquiring device information from all devices connected to the network (see lines 27-47 of column 4);

wherein if it is discriminated in the discrimination step that the network is constituted by a single bus, the information acquisition step is executed with respect to all of the devices connected to the local bus (see lines 23-50 of column 5); and

if it is discriminated in the discriminating step that the network is constituted by a plurality of buses, the information

acquisition step is executed with respect to all devices connected to the busses each having the bus ID acquired (see lines 23-50 of column 5).

Hattig fails to teach an information discarding means for, when at least one of the remote busses is disconnected from the network, discarding device information of devices connected to the remote bus;

Yanagawa teaches, in an analogous system, an information discarding means for, when at least one of the remote busses is disconnected from the network, discarding device information of devices connected to the remote bus (see lines 3-25 of column 19).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device controller of Hattig with the above teachings from Yanagawa. One of ordinary skill in the art would have been motivated to make such modification in order to reduce memory consumption by discarding information that is currently not usable.

5. Referring to apparatus claim 18 and method claim 31, Hattig discloses receiving discovery information for all of the devices connected to the network (see abstract). When discovery of a

bridge is made is it discovered that the network must comprise a plurality of buses.

6. Referring to apparatus claim 19 and method claim 32, Hattig discloses assigning ID numbers to the buses based on the total number of buses (see lines 23-50 of column 5). Hence when a bus ID greater than 1 is acquired, during the bus ID acquisition step, the network comprises a plurality of buses.

7. Referring to apparatus claims 21 and 23 and method claims 34 and 36, Hattig discloses at least one bus ID management node for managing bus ID usage information in which all bus IDs assigned to at least one bus constituting the network is connected to the network, wherein the bus ID acquisition means acquires bus ID's assigned to all the buses by acquiring the bus ID usage information from the bus ID management node and at least one identifier management node for managing the identifiers, acquired by performing the identifier acquisition step with respect to the devices connected to each bus, by writing the identifiers in identifier usage information is connected to each of the buses of the network, wherein the individual device acquisition means performs information acquisition with respect to each of the device identified by the

identifier written in the identifier usage information acquired from the identifier management node (see lines 8-22 of column 5; Note the discovery devices disclosed by Hattig, functions as the bus ID management node and the identifier management node).

8. Referring to apparatus claim 22 and method claim 35, Hattig discloses the information acquisition means comprises an identifier acquisition means for acquiring an identifier assigned to each of the devices connected to the buses of the network; and

individual device information acquisition means for acquiring the device information from each device identified by the identifier acquired in the identifier acquisition step (see lines 58-67 of column 4 and lines 1-7 of column 5).

9. Referring to apparatus claim 24 and method claim 38, Hattig fails to teach an initialization notification request means for requesting the node connected to the remote bus to notify occurrence of the initialization in each of the remote buses, and the information acquisition means performs information acquisition again with respect to each of the devices connected to the remote bus upon reception of a notification to the initialization request step. Hattig does disclose that this

method is well-known in the art as a means of forwarding the initialization requests (see lines 11-25 of column 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method of Hattig such that is comprises an initialization notification request step of requesting the node connected to the remote bus to notify occurrence of the initialization in each of the remote buses, and the information acquisition step is performed again with respect to each of the devices connected to the remote bus upon reception of a notification to the initialization request step because Hattig suggests this method is well-known and an accurate bus topology can be maintained even if there are a plurality of buses.

10. Referring to claim 29, Hattig discloses information acquisition system comprising a device controller which includes:

discriminating means for discriminating whether the network is constituted by a plurality of buses or a single bus (see lines 27-47 of column 4);

bus ID acquisition means for acquiring a bus ID assigned to each of the remote busses (see lines 27-47 of column 4);

information acquisition means for acquiring device information from all devices connected to the network (see lines 27-47 of column 4);

wherein if it is discriminated in the discrimination step that the network is constituted by a single bus, the information acquisition step is executed with respect to all of the devices connected to the local bus (see lines 23-50 of column 5); and

if it is discriminated in the discriminating step that the network is constituted by a plurality of buses, the information acquisition step is executed with respect to all devices connected to the busses each having the bus ID acquired (see lines 23-50 of column 5); and

a bridge for forming a network by connecting a plurality of buses to which devices are connected (see item labeled 312 in figure 2), the bridge including:

transmission means for, upon reception of a read request output by the device controller for information held by the bridge, transmitting the information to the device controller (see lines 47-60 of column 2).

Hattig fails to teach an information discarding means for, when at least one of the remote busses is disconnected from the network, discarding device information of devices connected to the remote bus;

Yanagawa teaches, in an analogous system, an information discarding means for, when at least one of the remote busses is disconnected from the network, discarding device information of devices connected to the remote bus (see lines 3-25 of column 19).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device controller of Hattig with the above teachings from Yanagawa. One of ordinary skill in the art would have been motivated to make such modification in order to reduce memory consumption by discarding information that is currently not usable.

11. Referring to claim 37, Hattig discloses at least one device information holding node for holding device information acquired in the individual device information step is connected to each of the buses in the network by performing the identifier acquisition step and the individual device information step with respect to the devices connected to each bus, and the device information is acquired from the device information holding node (see lines 8-22 of column 5; Note The discovery devices disclosed by Hattig, functions as the information holding device).

12. Claims 20 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattig in view of Yanagawa as applied to claim 17 above and further in view of Scheel et al. (U.S. Patent No. 6,445,711 hereinafter referred to as Scheel).

13. Referring to apparatus claim 20 and method claim 33, the combination of Hattig and Yanagawa fails to disclose each of the bridges receives an asynchronous packet on the local bus and holds forwarding information for determining whether to forward the asynchronous packet to the remote buses, and the bus ID acquisition step comprises acquiring forwarding information from all of the bridges connected to the local bus.

Scheel discloses the bridges receiving an asynchronous packet on the local bus and holds forwarding information for determining whether to forward the asynchronous packet to the remote buses (see lines 6-52 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Hattig and Scheel such that it comprises the bridges receiving an asynchronous packet on the local bus and holds forwarding information for determining whether to forward the asynchronous packet to the remote buses. One of ordinary

skill in the art at the time of the applicant's invention would have been motivated to make such modification in so the packets can be received by the appropriate node even if it is on a different bus.

Allowable Subject Matter

14. Claims 1-14 are allowed.

15. Claims 25-28 and 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

16. Applicant states in the fourth full paragraph of the remarks filed 12/1/03 that originally filed claims 1-10 were cancelled in a reply filed 7/8/03. However, this is not the case. Originally filed claims 1-10 were amended in the reply filed 7/8/03.

17. Applicant's arguments with respect to claims 17-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J Sorrell whose telephone number is 703 305-7800. The examiner can normally be reached on Monday-Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS
June 21, 2004

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100